Staunton 2020 Transportation Plan

Developed for the

Transportation Planning Division

of the

Virginia Department of Transportation

in cooperation with the

U.S. Department of Transportation, Federal Highway Administration

and the

City of Staunton

October 2003

This report does not constitute a standard, specification, regulation or provide a funding mechanism for the included transportation recommendations.

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INTRODUCTION

The *Staunton 2020 Transportation Plan* (the Plan) was developed as a cooperative effort between the Federal Highway Administration, the Virginia Department of Transportation (VDOT), and the City of Staunton. The Plan is the product of a study that evaluated the transportation system in Staunton and recommended a set of transportation improvements to best satisfy existing and future transportation needs. The study identified needs based on the engineering analysis, capacity, and safety of the transportation system.

Effective transportation systems are essential to continued local and statewide economic growth and development. Providing safe, effective and efficient movement of people and goods is a basic goal of all transportation programs in Virginia. It is with this basic goal in mind, and with further consideration of environmental issues and local government transportation objectives, that this Plan was developed.

VDOT will use this Plan when evaluating requests from the City of Staunton for specific transportation projects, and when implementing projects on the VDOT-maintained roadway system. The recommendations in this *Staunton 2020 Transportation Plan* will also be used as part of the VDOT statewide transportation planning process to ensure that local transportation projects are compatible with and support transportation improvements both statewide and in neighboring localities.

STUDY AREA AND THOROUGHFARE SYSTEM

Staunton is located near the geographic center of Augusta County. It lies in the Shenandoah Valley, between the Blue Ridge Mountains to the east and the mountains of George Washington National Forest to the west. The city is located at the junction of Interstate 81 (north-south) and the western terminus of the eastern leg of Interstate 64. (I-64 continues to the west from Lexington, 30 miles south of Staunton.) Staunton is also at the junction of U.S. Route 11 and U.S. Route 250. The city covers an area of 19.8 square miles.

The area around Staunton was settled in 1732, and the city's lot and street system dates back to 1747. The city is the home of Mary Baldwin College, which was founded in 1842, and Western State Hospital, which was founded in 1828. It is also home to the Virginia School for the Deaf and Blind and the Staunton Correctional Center. The city has also historically served as a hub for the surrounding agricultural community. With the construction of a rail line in the 1800s, the city's value increased as a depot for grain shipments bound to points east. Today, the local economy is sustained chiefly by manufacturing companies. Staunton serves as the seat of Augusta County.

The city was spared the damage that many other communities in the Shenandoah Valley suffered during the Civil War. As a result, many homes and building from the 18th and early 19th century are still standing. The city has had an active historic preservation movement for many years, and in 2001 was designated by the National Trust for Historic Preservation as one of its "Dozen Distinctive Destinations" in the United States, an award given for planning and historic preservation efforts.

A subset of the city's roadway network is designated as the urban thoroughfare system. The thoroughfare system includes roads that are functionally classified as collectors or arterials. Arterial roads serve as the major traffic-carrying facilities in the area. Collector roads carry a lesser volume of traffic and feed traffic to the arterial roadways. The focus of the *Staunton 2020 Transportation Plan* is the thoroughfare system. Also, in addition to roadways, improvements to the following other modes of transportation have been evaluated as part of this study: parking; bicycle and pedestrian facilities; intercity rail, bus, and air travel; transit and paratransit; taxi; and the movement of goods.

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DEMOGRAPHIC OVERVIEW

In the last U.S. Census conducted in 2000, the population of Staunton was recorded as 23,853. This represents a slight decline from the city's 1990 population of 24,461. Based on these figures and input from local officials, the city's population is expected to remain steady or decline slowly through the 20-year horizon of this study. The primary industries in Staunton relate to education and manufacturing. In addition to Mary Baldwin College and Western State Hospital, Staunton is home to Unifi Corportation, Teno Films, Staunton Metal Recyclers and Best Buy, which has a distribution center in Staunton. Spokesmen for each company expect the number of jobs with each of these local employers to remain steady or increase slightly in the foreseeable future.

SUMMARY OF APPROACH AND ANALYSIS METHODS

This transportation plan was developed using a process that included:

- Data Collection
- Forecasting of Future Traffic Demands
- Development of Recommendations to Meet Existing and Future Transportation Needs
- Coordination with Staunton Citizens and Government Officials
- Environmental Overview and Plan Documentation

Recommendations for the Staunton 2020 Transportation Plan are based on a comprehensive review of the capacity, safety, and geometry of the roadway system as well as on other issues that affect the area's transportation system, such as parking, other modes of transportation, and goods movement. The recommendations were divided into three phases. Phase One recommendations apply to existing deficiencies and the most immediate transportation needs of the area. Phase Two recommendations apply to transportation improvements needed by the year 2010, and Phase Three recommendations are long-term projects needed by 2020.

PHASE ONE: BASE YEAR (2001) RECOMMENDATIONS

This study identified current deficiencies in the Staunton transportation system. Potential deficiencies in the existing transportation system included traffic flow and safety concerns, parking, and goods movement by truck. Six projects were identified as short-term, immediate improvements and are described below.

Greenville Avenue at Statler Boulevard

To reduce the number of accidents occurring due to driveways near the intersection, left turns from these driveways should be prohibited. It is recommended that medians approximately 500 feet long be constructed on both Greenville Avenue approaches to the intersection.

Richmond Avenue at Statler Boulevard

Improve intersection capacity by adding a second left-turn lane on Statler Boulevard southbound to Richmond Avenue eastbound. The left-turn traffic currently exceeds 500 vehicles per hour during the PM peak hour.

Commerce Road at Woodrow Wilson Parkway

Install deer crossing signs to warn motorists in the vicinity of the intersection.

Commerce Road at Coalter Street

Enhance safety for the eastbound right-turn movement. Remove the yield sign and install a pedestal signal to control eastbound right turns. The appropriate signal phasing and timing modifications would be implemented.

Beverly Street at Augusta Street

Warn motorists approaching the intersection that a signal is ahead by installing warning signs on each approach.

Churchville Avenue from Augusta Street to Lewis Street

Construct left turn lanes to alleviate congestion caused by the close proximity of intersections. This project is included in the Virginia Transportation Six-Year Program with construction anticipated to begin in FY 2005-2006.

PHASE TWO: INTERIM YEAR (2010) RECOMMENDATIONS

The interim year recommendation for the *Staunton 2020 Transportation Plan* addresses an existing deficiency, but based on projected costs and potential impacts, would require a number of years to plan and fund.

Hampton Street from Middlebrook Avenue to Greenville Avenue

Increase roadway capacity of the two-lane collector to accommodate projected traffic volumes of more than 19,000 vehicles per day. It is recommended that Hampton Street be widened to a four-lane section with a median.

PHASE THREE: FUTURE YEAR (2020) RECOMMENDATIONS

The Phase Three recommendations in the *Staunton 2020 Transportation Plan* are intended to support the economic and business needs of the community while enhancing both the appeal and traffic operations of the Staunton downtown area. Eleven projects fit in this category for Staunton.

Beverly Street at Frederick Street

Increase intersection capacity to accommodate projected traffic growth. A traffic signal should be installed when the warrants set forth in the Manual on Uniform Traffic Control Devices (MUTCD) are met.

Churchville Avenue at Englewood Drive

Increase intersection capacity to accommodate projected traffic growth. A traffic signal should be installed when the warrants set forth in the MUTCD are met.

Coalter Street at Frederick Street

Increase intersection capacity to accommodate projected traffic growth. A traffic signal should be installed when the warrants set forth in the MUTCD are met.

Donaghe Street at Lambert Street

Increase intersection capacity to accommodate projected traffic growth. A traffic signal should be installed when the warrants set forth in the MUTCD are met.

Commerce Road at Statler Boulevard

A second left-turn lane should be constructed to accommodate a projected left-turn volume of almost 500 vehicles per hour during the PM peak hour for the Statler Boulevard westbound to Commerce Road southbound movement.

Edgewood Road from Augusta Avenue to Coalter Street

With future traffic volumes of more than 14,000 vehicles per day expected on Edgewood Road, the recommendation is to widen the roadway to four lanes with a median from Coalter Street to Augusta Avenue.

Churchville Avenue from Grubert Avenue to Thornrose Avenue

To accommodate increased traffic volume, widen Churchville Avenue to four lanes with a median from Grubert Avenue to Thornrose Avenue. The recommendation includes improving the geometry at the intersection of Churchville Avenue and Thornrose Avenue by removing the offset.

Bridge Street from Middlebrook Avenue to Stuart Street

To accommodate increased traffic volume, widen Bridge Street to four lanes with a median. The recommendation will include widening the bridge and improving the turning radii at both ends of Bridge Street.

Richmond Avenue from Statler Boulevard to Frontier Drive

Construct frontage roads to provide safer, more efficient access to businesses located along Richmond Avenue between Statler Boulevard and Frontier Drive. This improvement is listed in the development phase of the Virginia Transportation Six-Year Program (FY 2003-2008).

Frontier Drive from South Corporate Limit to Richmond Avenue

To accommodate projected traffic volumes of almost 14,000 vehicles per day, widen roadway to four lanes with a median. This improvement could be implemented in phases, beginning at Richmond Avenue and proceeding south as development occurs.

Richmond Avenue from Frontier Drive to I-81 Ramps

With future traffic volumes of more than 36,000 vehicles per day expected on Richmond Avenue and anticipated future development on Frontier Drive, widening the roadway to six lanes with a median from Frontier Drive to I-81 Ramps is recommended. This recommendation is consistent with the Interstate 81 Improvement Study.

OTHER MODES AND GOODS MOVEMENT

In developing the *Staunton 2020 Transportation Plan*, all modes of travel were considered. The Plan also considers the quality of the local transportation system for the movement of goods for commercial purposes.

The City of Staunton operated a bus system in the 1970s and 1980s which was discontinued due to low ridership. City officials have considered a downtown trolley system and the feasibility of the trolley should continue to be investigated. Intercity bus service is not provided directly to Staunton. However, Greyhound has a terminal in nearby Verona. The city also provides the community with a paratransit service, the Coordinated Area Transportation System (CATS). CATS is available on demand from 6 a.m. to 6 p.m. on weekdays. Taxi service is available from a single taxi company, City Cabs, operating out of Waynesboro. City Cabs offers service to Staunton 24 hours a day, 7 days a week.

The city is served by intercity rail three days a week. Amtrak operates a station in the Wharf area of the city. Service is via Amtrak's Cardinal line, which runs east through Charlottesville to Washington, DC, and west through West Virginia to Chicago, Illinois. Commercial air service is available out of the Shenandoah Regional Airport, about 10 miles north of Staunton. U.S. Air runs commercial passenger service to Pittsburgh from this location.

Most goods movement in and through Staunton is accomplished by truck. While truck flow through the city is generally adequate, several of the proposed roadway recommendations will improve truck access for shippers by reducing congestion and making turning movements easier. Limited shipping via the CSX railroad was also reported.

LOCAL PROJECTS

The City of Staunton identifies, plans, and implements transportation projects as part of its capital improvement process. Six local projects were identified by the City for inclusion in this Plan.

Northeast Connector from National Avenue to 0.9 miles west of Commerce Road

Construct an urban two-lane facility on new alignment to divert traffic east of Staunton's downtown.

Northeast Connector from Woodlee Heights to Commerce Road

Construct an urban two-lane facility on new alignment to divert traffic west of Staunton's downtown.

Local Road Extension from Local Road to Northeast Connector

Provide access to the Northeast Connector for traffic on Springhill Road. The recommendation is to construct a two-lane facility connecting the existing local road to the Northeast Connector.

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Southeast Connector from Frontier Drive to Richmond Avenue
Construct a roadway on new alignment to divert traffic from the downtown intersections in Staunton.

Montgomery Avenue Extension
Extend existing Montgomery Avenue from existing southbound terminus to Middlebrook Avenue to help the flow of goods movement traffic to industrial facilities.

Woodrow Wilson Parkway (Route 275) Access
Plan for adequate access along Woodrow Wilson Parkway for proposed development. Residential development planned between Springhill Road and Route 11 will require a new access point onto Woodrow Wilson Parkway. Review of the intersection design by City and VDOT staff will be necessary upon submission of development plans to ensure adequate capacity.

ENVIRONMENTAL OVERVIEW
An environmental overview was conducted for the *Staunton 2020 Transportation Plan*. No environmental features were identified in Staunton that would preclude the implementation of any of the included recommendations.

LOCAL COORDINATION AND CITIZEN PARTICIPATION
The development of the *Staunton 2020 Transportation Plan* included coordination meetings with City officials and a public meeting with citizens, local officials, and VDOT representatives.

The three coordination meetings held for this study were: 1) a kick-off meeting, (2) an existing conditions meeting, and (3) a draft recommendations meeting. The kick-off meeting, held in January 2000, enabled the project team to discuss the purpose and scope of the study, the schedule for data collection, Plan preparation, and the coordination process. At the second meeting, held in October 2001, the project team presented the results of the base year and horizon year traffic analyses and discussed potential projects to satisfy projected transportation needs. During a third meeting, held in December 2001, a draft set of transportation improvements was developed by the project team, City officials, and VDOT representatives.

A public meeting was held May 25, 2002 to present the draft Plan to City officials, citizens and other interested parties. Meeting participants were invited to provide comments on the draft Plan that were considered in the development of the final *Staunton 2020 Transportation Plan*.

PLAN ADOPTION
The Staunton City Council voted to adopt the *Staunton 2020 Transportation Plan* on October 24, 2002.

ADDITIONAL INFORMATION
Detailed information on the development of the *Staunton 2020 Transportation Plan* and the study recommendations will be included in the *Staunton 2020 Transportation Plan Technical Report*. This document will be available for review at the Staunton City Hall and the local library. The technical report will also be available in Richmond at the central office of VDOT's Transportation Planning Division, the VDOT District office in Staunton, and the VDOT Residency office in Verona.

Projects in the Virginia Transportation Six-Year Program (FY 2004-2009) are included as part of the Staunton 2020 Transportation Plan. The Six-Year Program can be reviewed online at www.VirginiaDOT.org.

Information on Six-Year Program projects for the City of Staunton can also be obtained by contacting the VDOT Resident Engineer at the Harrisonburg Residency Office (540-332-8989).

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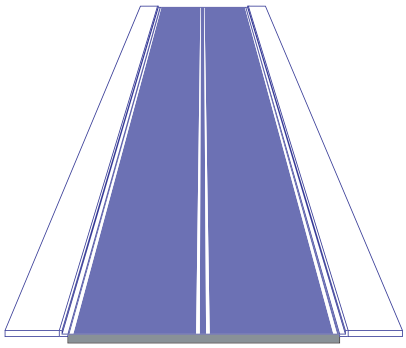
Route	Facility Name	From	To	Road Segment Length	Recommendation	Estimated Cost [1]	Existing Typical Section	Recommended Typical Section	Average Daily Traffic		
									Year 2001	Year 2010	Year 2020
	Beverly Street	Frederick Street	N/A	N/A	Install signal	$180,000	N/A	N/A	N/A	N/A	N/A
250	Churchville Avenue	Englewood Drive	N/A	N/A	Install signal	$180,000	N/A	N/A	N/A	N/A	N/A
	Coalter Street	Frederick Street	N/A	N/A	Install signal	$180,000	N/A	N/A	N/A	N/A	N/A
	Donaghe Street	Lambert Street	N/A	N/A	Install signal	$180,000	N/A	N/A	N/A	N/A	N/A
11	Commerce Road	Statler Boulevard	N/A	N/A	Add left-turn lane on Statler Boulevard westbound to Commerce Road southbound	$549,000 [2]	N/A	N/A	N/A	N/A	N/A
909	Edgewood Road	Augusta Street	Coalter Street	0.3	Widen to 4 lanes with median	$2,385,000 [3]	U2	U4D	12,190	13,400	14,600
915	Hampton Street	Middlebrook Avenue	Greenville Avenue	0.2	Widen to 4 lanes with median	$1,590,000 [3]	U2	U4D	16,300	17,900	19,600
250	Churchville Avenue	Grubert Avenue	Thornrose Avenue	1.0	Widen to 4 lanes with median; includes removing offset at Thornrose Avenue	$7,950,000 [3]	U2	U4D	13,700	15,100	16,400
902	Bridge Street	Middlebrook Avenue	Stuart Street	0.2	Widen to 4 lanes with median	$1,590,000 [3]	U2	U4D	9,320	10,300	11,200
912	Frontier Drive	Southern Corporate Limits of Staunton	Richmond Avenue	1.0	Widen to 4 lanes with median	$7,950,000 [3]	U2	U4D	7,700	10,800	13,900
11	Greenville Avenue	Statler Boulevard	N/A	N/A	Construct medians on Greenville Ave intersection approaches	$600,000 [4]	N/A	N/A	N/A	N/A	N/A
250	Richmond Avenue	Statler Boulevard	N/A	N/A	Add left-turn lane on Statler Boulevard southbound to Richmond Avenue eastbound	$549,000 [2]	N/A	N/A	N/A	N/A	N/A
11	Commerce Road	Woodrow Wilson Parkway	N/A	N/A	Install deer crossing signs	$24,000 [5]	N/A	N/A	N/A	N/A	N/A
11	Commerce Road	Coalter Street	N/A	N/A	Modify signal to include control of eastbound right turn; remove yield condition	$45,000	N/A	N/A	N/A	N/A	N/A
11 / 250	Augusta Street	Beverly Street	N/A	N/A	Install signal warning signage	$9,000 [5]	N/A	N/A	N/A	N/A	N/A
250	Richmond Avenue	Frontier Drive	I-81 Ramps	1.1	Widen to 6 lanes with median, including new westbound bridge deck	$12,393,000 [6]	U4D	U6D	30,300	33,300	36,400
	Northeast Connector	National Avenue	0.9 Miles West of Commerce Road	3.0	Construct roadway on new alignment	$9,450,000 [7][8]	N/A	U2	N/A	N/A	N/A
	Northeast Connector	Woodlee Heights	Commerce Road	3.0	Construct roadway on new alignment	$9,450,000 [7][8]	N/A	U2	N/A	N/A	N/A
	Local Road Extension	Local Road	Northeast Connector	0.3	Extend existing Local Road	$945,000 [7][8]	N/A	U2	N/A	N/A	N/A
	Southeast Connector	Frontier Drive	Richmond Avenue	1.5	Construct roadway on new alignment	$4,725,000 [7][8]	N/A	U2	N/A	N/A	N/A
	Montgomery Avenue Extension	Existing southern terminus of Montgomery Ave	Middlebrook Avenue	0.5	Extend existing Montgomery Avenue	$1,575,000 [7][8]	N/A	U2	N/A	N/A	N/A
250	Churchville Avenue	Lewis Street	Augusta Street	0.1	Construct Left Turn Lanes (Improved typical section would be U2 plus left turn lanes.)	$3,356,000 [9]	U2	U2	11,850	13,000	14,200
250	Richmond Avenue	Statler Boulevard	Frontier Drive	1.0	Corridor Improvements (Service Roads)	$4,340,000 [9]	U4D	U4D	25,500	28,000	30,600
					ESTIMATED TOTAL THOROUGHFARE SYSTEM COST	$44,050,000 [8]					

Notes:

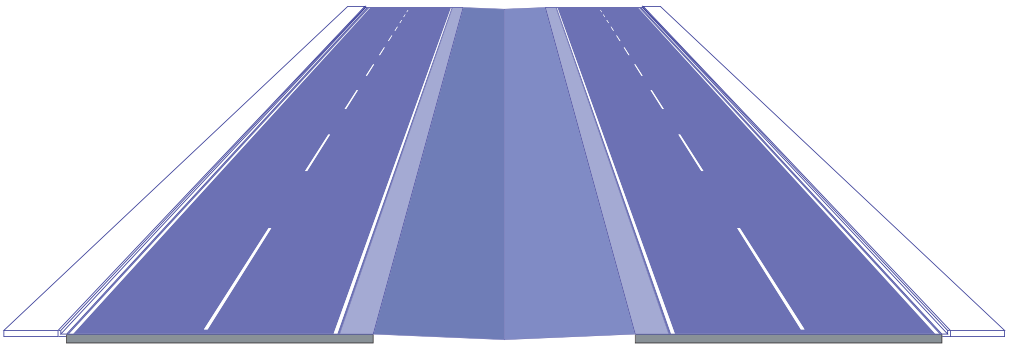
[1] Cost estimates included in this table are planning level costs in year 2000 dollars. These cost estimates are based on statewide unit cost averages and should be should be used for planning purposes only. Actual construction and right-of-way costs may vary based on local conditions.
[2] Cost estimate covers 500' parallel lane and 700' taper on a 2 lane road.
[3] Assumes a unit cost of $5,300,000 per mile plus 50 percent of total construction cost for right of way acquisition and utilities.
[4] Cost estimate assumes $1,000,000 per lane mile for 2,000 feet of reconstructed lane with median, $25,000 for reconstruction of one quadrant plus 50% of total construction cost for right-of-way acquisition.
[5] Assumes a unit cost of $3,000 per sign.
[6] Assumes a unit cost of $6,900,000 per mile plus 50 percent of total construction cost for right of way acquisition and utilities. Assumes a unit cost of $105 per square foot of bridge deck.
[7] Assumes a cost of $2,100,000 per mile for U2 (26' - 30') roadway plus 50 percent for right of way and utilities.
[8] Local projects are not included in total thoroughfare system cost.
[9] Included in 2004-2009 Six-Year Program (Development Phase).

N/A Not Applicable

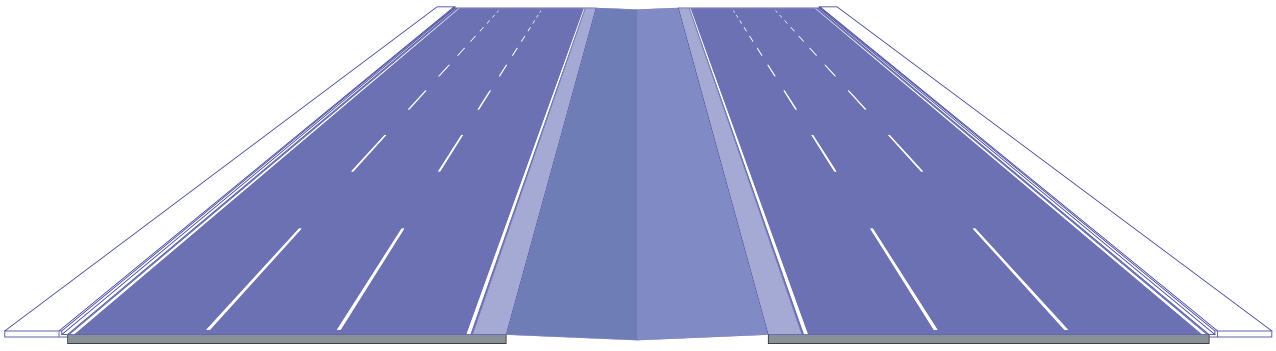
TYPICAL SECTIONS



U2
Urban two-lane roadway with curb and gutter



U4D
Urban four-lane divided roadway with curb and gutter



U6D
Urban six-lane divided roadway with curb and gutter

Unless right-of-way considerations preclude their inclusion, sidewalks are recommended on both sides of these urban roadways.